SICI and BICI: Identifiers for Serials and Books

Reference/Citation Linking: The Federal Perspective

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SICI and BICI

- ANSI/NISO Z39.56-1996 (Version 2) -- Serial Item and Contribution Identifier (SICI)
- Book Item and Component Identifier (BICI) (being developed by NISO Subcommittee AP)

SICI and BICI

- Background and Environment for Development
- Structure
- Applications
- Criticisms and Suggestions for Improvement
- Future Development

The Challenges

- Need for increased granularity to identify intellectual units
- Need for interoperability and data exchange between different industries and applications using different computer systems

SICI Background

- Version 1 development
  - SISAC
  - Specific application (fixed length)
- Version 2 development
  - Before 5-year review
  - Users identified possible new applications and problems with version 1

SICI Development Goals

- Z39.56 (1991)
  - Cover broad range of serials regardless of physical format
  - Short, but bibliographically unique
  - Derivable from citation or source document -- not externally assigned or derived
  - Maintain consistency with and build upon existing standards, e.g., ISSN

SICI Development Goals

- Z39.56 (1996)
  - More rigorous rules relating to mandatory and optional fields
  - Defined internal structure of SICI to have three distinct segments (Item, Contribution, Control)
  - Defined external structure types to identify Serial Item vs. Serial Contribution (issue or article)
  - Allows private numbering systems
  - Stores/includes medium of distribution (text on paper, electronic, microform, etc.)
  - Title code algorithm significantly improved -- length and inclusiveness

SICI Structure -- CSI-1

- Item Segment
  - ISSN
  - Chronology
  - Enumeration
- Contribution Segment
  - [Empty -- required but will have no data]
- Control Segment
  - Code Structure Identifier (CSI)
  - Derivative Part Identifier (DPI)
  - Medium Format Identifier (MFI)
  - Version Number
  - Check Character

SICI Example -- CSI-1

Bulletin of the American Society for Information Science, Feb-Mar. 1995, Vol. 21, no. 3

- 1991 SICI:
  - 0095-4403(199502/03)21:3;1-N
- 1996 SICI:
  - 0095-4403(199502/03)21:3<>1.0.TX;2-Y

SICI Structure -- CSI-2

- Item Segment
  - ISSN
  - Chronology
  - Enumeration
- Contribution Segment
  - Location (page)
  - Title Code
  - Alternative Numbering Schemes
- Control Segment
  - Code Structure Identifier (CSI)
  - Derivative Part Identifier (DPI)
  - Medium Format Identifier (MFI)
  - Version Number
  - Check Character

SICI Example -- CSI-2

Bjorner, Susanne. “Who Are These Independent Information Brokers?” *Bulletin of the American Society for Information Science*, Feb-Mar. 1995, Vol. 21, no. 3, page 12

- 1991 SICI:
  - 0095-4403(199502/03)21:3L.12:TII;1-N
- 1996 SICI:
  - 0095-4403(199502/03)21:3<12:WATIIB>2.0.TX;2-J

SICI Example -- CSI-3

ERIC Document EJ 462 869, originally published in *Library Hi Tech*, Vol. 11, no. 1, 1993

- 1991 SICI:
  - N/A
- 1996 SICI:
  - 0737-8831(1993)11:1<::ERIC-EJ462869>3.0.TX;2-F

SICI Applications

- SICI Bar Code
- EDI using SICI CSI-1
  - Price/sales catalog
  - Dispatch data
  - Invoice
  - Order
  - Claim
  - Claim Response

SICI Applications

- URN Namespace
- Document Delivery
  - Data string in delivery services
- Reference Linking
  - Library catalog records to index or full-text databases

SICI Criticisms

- Unicode
- Angle Brackets <>
- Title Code
- Sequencing
- Duplication (non-unique)

SICI Future Development

- Five-year review scheduled for 2001
- Character set issues -- Unicode
- More explicit reference to electronic journals
- Explicit statement regarding DOI
- Structure changes (<> and *#)
- Integration with web applications

BICI Background

- Begun in 1997 following completion of revision of SICI
- Develop standard identification schema for subunits of books
- Interest from rights management community
- International meetings on identifiers

BICI Development: Background Documents

- BIBLID
- SICI
- “A Standard Identifier for Book Items and Contributions” by David Martin for the Book Industry Communication (BIC) and the British National Bibliography Research Fund
- Work of INDECS

BICI Development Goals

- Limit scope of standard to code for unique identification of book items and their component parts
- Cover a broad range of books (scholarly, trade, and popular), regardless of physical form
- Maintain consistency with and build on the established ISBN already used successfully to identify books
- Create brief, unique code consistent with unique identification

BICI Development

- Does not address grey literature, technical reports or other documents
- Does not address component parts that have no enumeration (unnumbered dictionary or encylopedia entries)
- Includes redundancies for judgments on degrees of similarity of 2 BICIs derived from different sources

BICI Development Issues

- Granularity
  - How broad
  - How deep
- Logical vs. physical structure of book
  - Chapter, section, etc.
  - Location (page)
- Consistent with SICI

BICI Development Issues

- Focus on the ISBN
- Identifier vs. meaning
- Matching and uniqueness
- Character set -- Unicode

Current BICI Structure

- 3 Segments (Item, Component, Control)
- Control segment manages processing
- Code Structure Identifier data element specifies coding structure
- Focus on ISBN
- Logical and physical structure

Current BICI Structure

- Item Segment
  - ISBN
  - Chronology
  - Item enumeration
- Component Segment
  - Component enumeration
  - Title code
  - Location (e.g., pagination) or other numbering schema
- Control Segment
  - Code Structure Identifier (CSI)
  - Component Type Identifier (CTI)
  - Medium/Format Identifier (MFI)
  - Standard Version Number (SVN)
  - Check Character

Current BICI Example

Chapter 10: “English as a World Language” in *The English Language: A Historical Introduction*, 1993 pp. 234-261 ISBN 0-521-41620-5

BICI: 0521416205(1993)(10;EAAWL;234-261)2.2.TX;1-1

BICI Component Types

- 0 Whole item
- 1 Front matter
- 2 Main text subdivision (parts, chapters, sections, acts, etc.)
- 3 Discrete object within a book (abstracts, tables, figures, etc.)
- 4 Back matter (index, appendices, references, bibliographies)
- 5 Supplementary materials (maps, disks, erratum, etc.)

BICI Applications

- Abstracting and indexing services
- Document delivery services
- Coursepack producers
- Library reserve rooms
- Rights management agencies
- DOI system
- Publisher delivery systems
- E-books

BICI Community Review

- Changed <> to ()
- Include both logical and physical in component segment
- Use ; as delimiter between elements
- Restructure title code rules
- More e-book examples

BICI Future Development

- Final draft (committee draft 10) to be vetted by committee
- NISO draft out this summer
- Vote by NISO membership by fall
- Resolution of any negatives
- Publication by end of 2000

SICI and BICI

Any Questions???

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